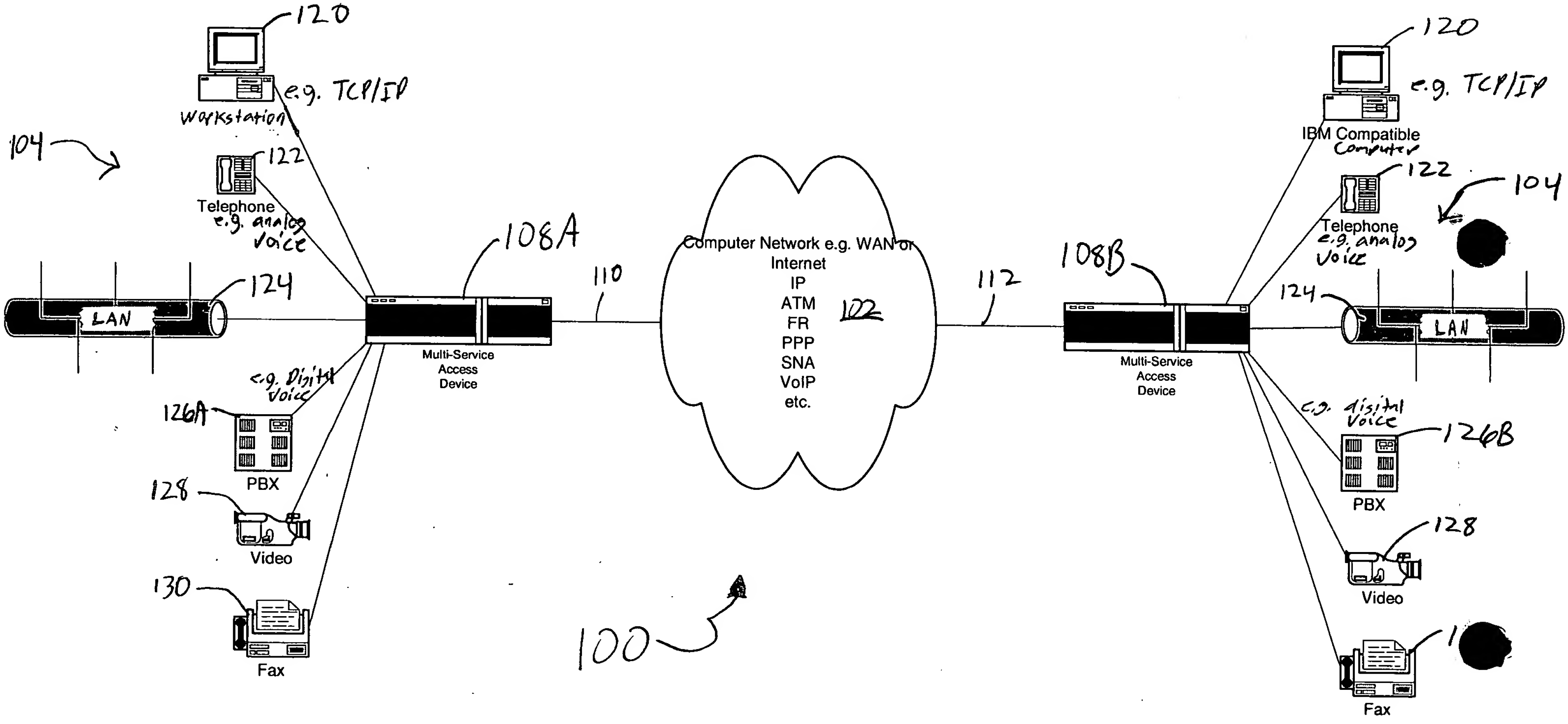
120
e.g. TCP/IP
Workstation
104
122
Telephone
e.g. analog voice
124
LAN
108A
Multi-Service Access Device
110
e.g. Digital Voice
126A
PBX
128
Video
130
Fax
Computer Network e.g. WAN or Internet
IP
ATM
FR
PPP
SNA
VoIP
etc.
102
100
112
108B
Multi-Service Access Device
120
e.g. TCP/IP
IBM Compatible Computer
122
Telephone
e.g. analog voice
104
124
LAN
e.g. digital voice
126B
PBX
128
Video
Fax

FIG. 1

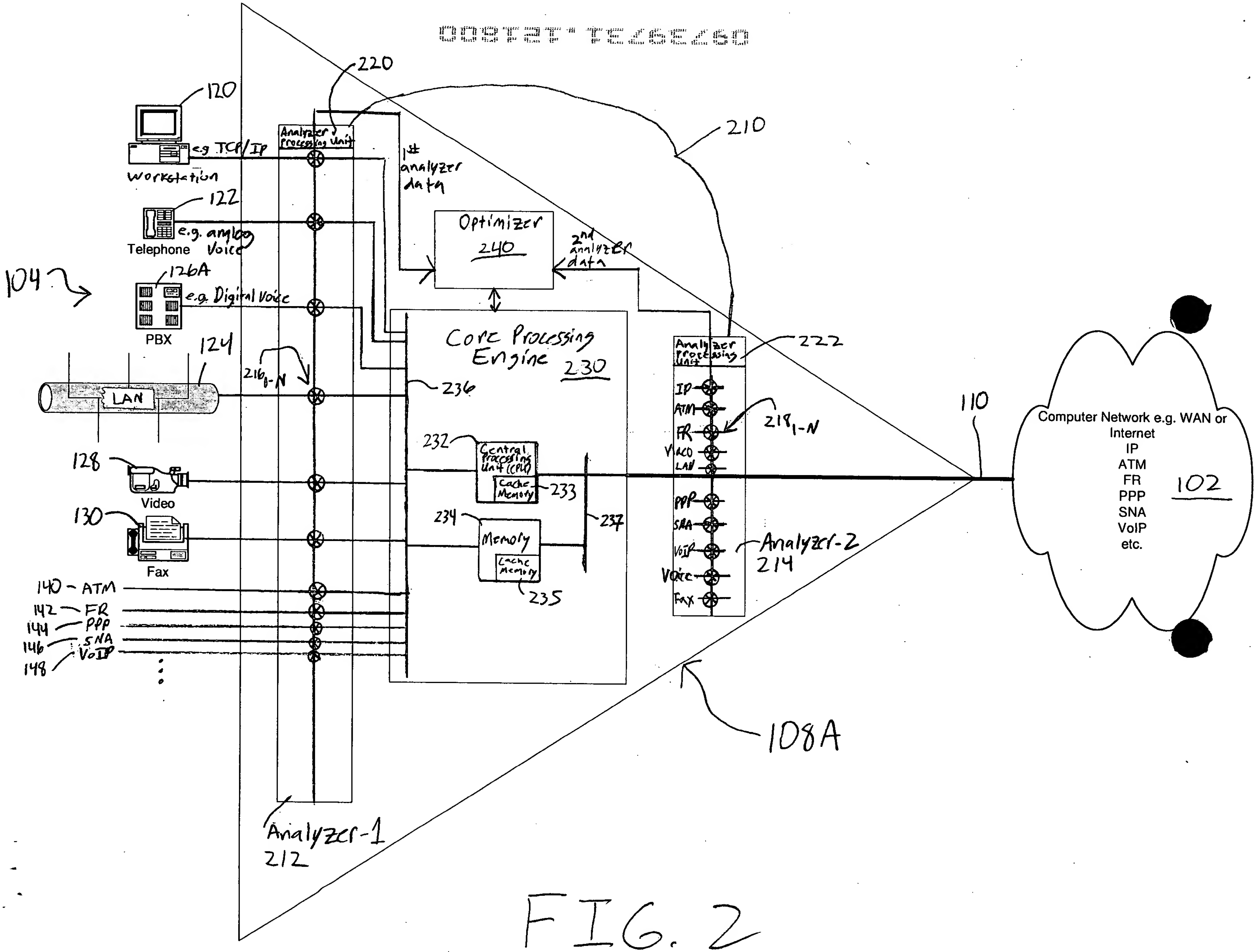
220
120
e.g. TCP/IP
Workstation
Analyzer Processing Unit
1st analyzer data
210
122
e.g. analog Voice
Telephone
Optimizer
240
2nd analyzer data
104
126A
e.g. Digital Voice
PBX
124
216_{1-N}
Core Processing Engine
230
Analyzer Processing Unit
222
LAN
236
IP
ATM
FR
219_{1-N}
Video
LAN
110
Computer Network e.g. WAN or Internet
IP
ATM
FR
PPP
SNA
VoIP
etc.
102
232
Central Processing Unit (CPU)
Cache Memory
233
128
Video
PPP
SNA
VoIP
Voice
Fax
234
Memory
Cache Memory
237
Analyzer-2
214
130
Fax
235
140 ATM
142 FR
144 PPP
146 SNA
148 VoIP
108A
Analyzer-1
212

FIG. 2

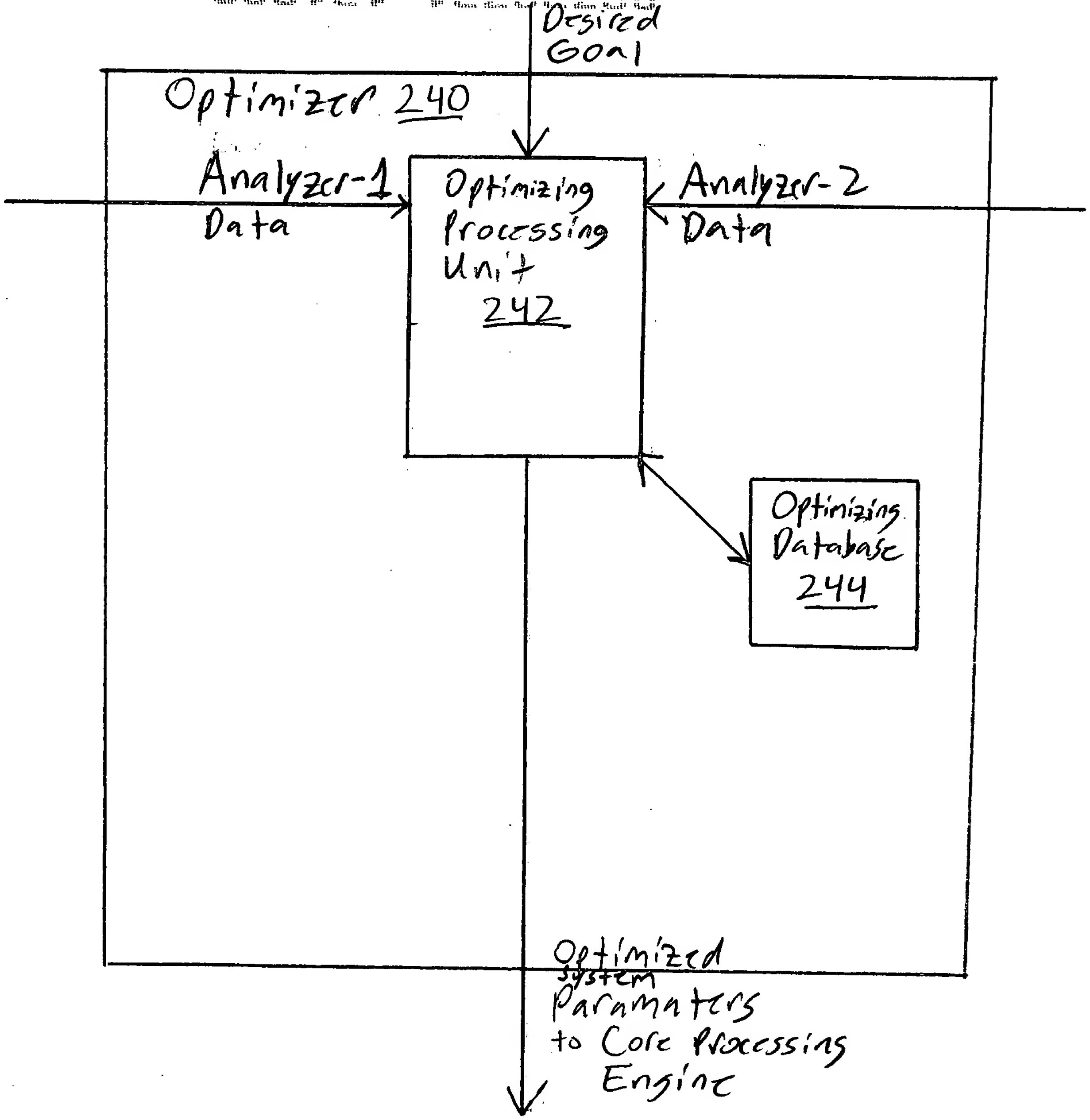
Desired Goal
Optimizer 240
Analyzer-1 Data
Optimizing Processing Unit 242
Analyzer-2 Data
Optimizing Database 244
Optimized system Paramaters to Core Processing Engine

FIG. 3

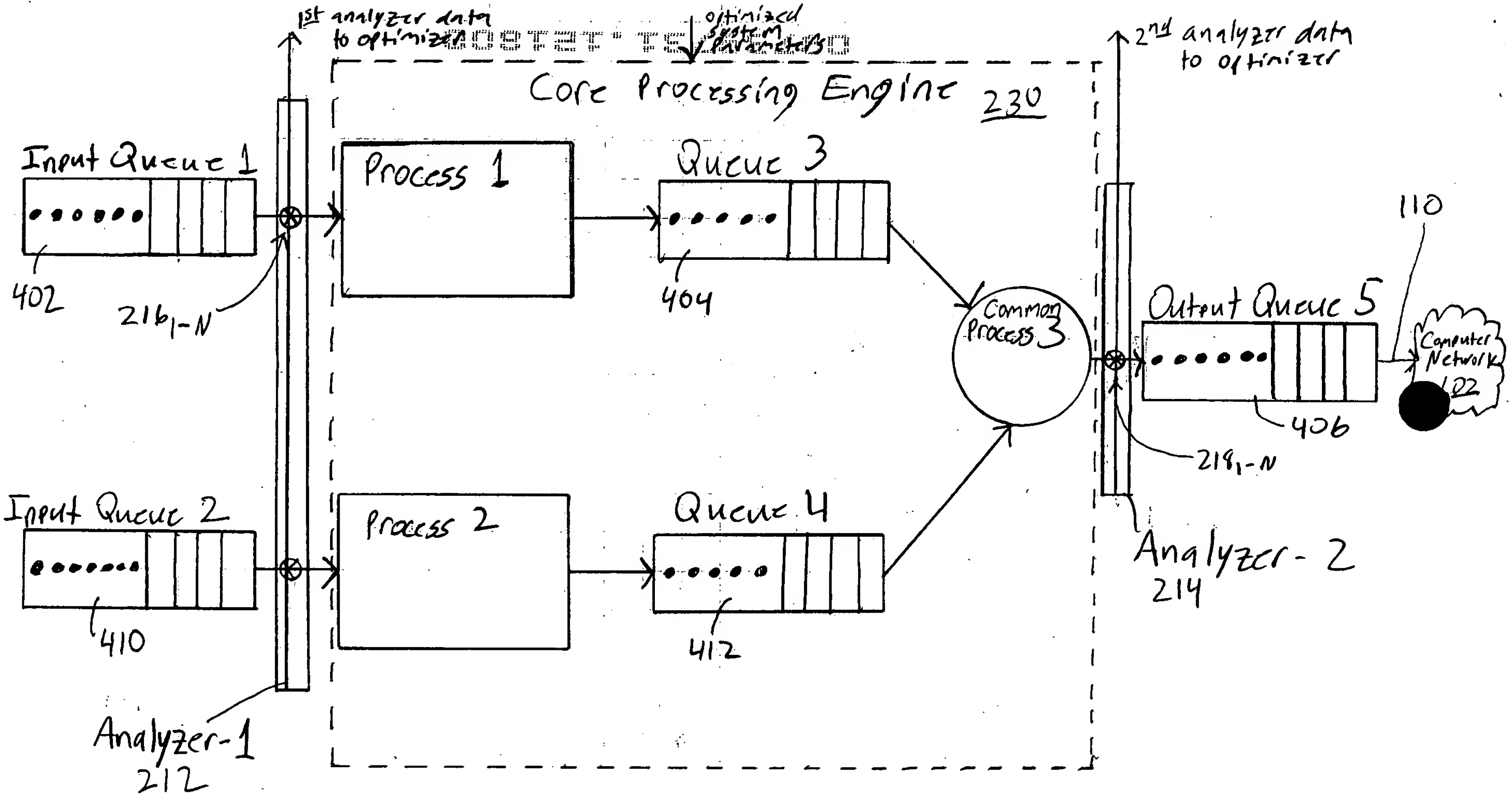
1st analyzer data to optimizer
optimized system parameters
2nd analyzer data to optimizer
Core Processing Engine 230
Input Queue 1
402
216₁-N
Input Queue 2
410
Analyzer-1 212
Process 1
Process 2
Queue 3
404
Queue 4
412
Common Process 3
Output Queue 5
406
219₁-N
Analyzer-2 214
110
Computer Network 102

FIG. 4

	Goal	Queue 1	Process 1	Queue 3	Process 3	Queue 5	Queue 2	Process 2	Queue 4
ROW 1	Queue 1 = Voice (High Priority) Queue 2 = Financial Data via SNA (low priority)	Queue = Small	High Scheduling Priority Large CPU allocation Large Cache allocation	Queue = Small	High Scheduling Priority Favor Queue 3 Large CPU allocation Large Cache allocation If congestion, Discard Queue 4	Queue = Small	Queue = Large	Low Scheduling Priority Small CPU allocation Small Cache allocation	Queue = Large
ROW 2	Queue 2 = Financial Data via SNA (High Priority) Queue 4 = Internet traffic via IP (Low Priority)	Queue = Large	LOW Scheduling Priority Small CPU allocation Small Cache allocation	Queue = Large	High Scheduling Priority Favor Queue 4 Large CPU allocation Large Cache allocation If congestion, Discard Other Queue	Queue = Large	Queue = Large	High Scheduling Priority Large CPU allocation Large Cache allocation	Queue = Large

FIG. 5